

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of: **Bhardwaj et al**

Group Art Unit: **2882**

Application Number: **09/977,065**

Filed: **10/12/2001**

Examiner: **SUCHECKI, Krystyna**

For: **WAVEGUIDE STRESS ENGINEERING AND COMPATIBLE PASSIVATION IN
PLANAR LIGHTWAVE CIRCUITS**

DECLARATION UNDER 37 CFR 1.131

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

City of San Jose
State of California,

I, Jyoti K. Bhardwaj, Robert J. Brainard, Zi-Wen Dong, David J. Dougherty, Erik W. Egan, Niranjan Gopinathan, David K. Nakamoto, Thomas T. Nguyen, Sanjay M. Thekdi, Anantharaman Vaidyanathan, Hiroaki Yamada, and Yingchao Yan declare that all statements made of my own knowledge are true, and that all statements made on information and belief are believed to be true:

1. I am an applicant of the above-identified patent application and an inventor of the subject matter described and claimed therein.
2. Prior to August 22, 2001, I conceived the idea of Waveguide Stress Engineering And Compatible Passivation In Planar Lightwave Circuits as described and claimed in our application.
3. Attached hereto is an invention disclosure dated March 20, 2001 by co-applicant and co-inventor Erik Egan marked as exhibit A, which discloses the invention claimed in the instant patent application. Exhibit A describes the claimed invention and clearly shows in Figure 1 with accompanying Table 1 the core overetch region which is a feature proximate to the core having at least one stress-engineered property to balance the stress and therefore minimize birefringence

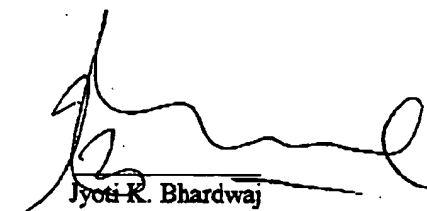
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the core. Prior to August 22, 2001 the invention was reduced to practice and samples were fabricated having the passivation layer defined the claims.

4. Attached is Exhibit B, which is a copy of an email, dated August 3, 2001, that describes a Nitride passivation layer as defined in claim 1. This layer was designed to be a protective passivation layer formed over the core and the feature formed to be substantially non-interfering with the balanced stress affecting the core provided by the feature. It was our understanding that the BPSG cladding at any composition of dopants would not provide sufficient reliability from accelerated stresses and decided to use a passivation layer such as Nitride to afford full protection against all environment stresses.

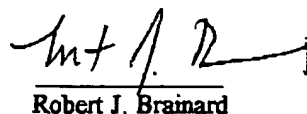
5. I acknowledge that willful false statements and the like are punishable by fine and/or imprisonment, and may jeopardize the validity of the application or any patent issuing therefrom.

Sworn at Milpitas, CA in the
State of California, this 1st day of
December, 2003



Jyoti K. Bhardwaj

Sworn at Milpitas, CA in the
State of California, this 3rd day of
December, 2003



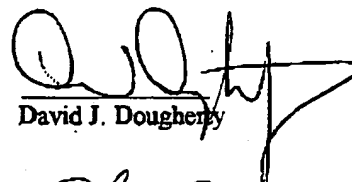
Robert J. Brainard

Sworn at Milpitas, CA in the
State of California, this 3rd day of
December, 2003



Zi-Wen Dong

Sworn at Milpitas, CA in the
State of California, this 2nd day of
December, 2003



David J. Dougherty

Sworn at Milpitas, CA in the
State of California, this 2nd day of
December, 2003



Erik W. Egan

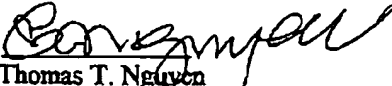
Sworn at MILPITAS in the
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Niranjani Gopinathan

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Anantharaman Vaidyanathan

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December, 2003


Hiroaki Yamada

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DECEMBER, 2003


Yingchao Yan